

LISTING OF THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A multiple head induction sealing unit for sealing objects traveling in a predetermined workflow direction comprising:
 - at least two induction heads;
 - at least two ferrite cores, each core disposed in a respective head;
 - each ferrite core structured and arranged to form a channel-shaped core having a longitudinal channel, the longitudinal channel being perpendicular to the workflow direction;
 - at least one conductive coil disposed inside the longitudinal channel of each ferrite core structured and arranged to direct an electromagnetic field towards an object to be heated without making contact with the object.
2. (NEW) The multiple head induction sealing unit of claim 1, wherein the at least one conductive coil is a litz wire coil.
3. (NEW) The multiple head induction sealing unit of claim 1, further comprising:
 - a housing;
 - a multiple head inductive sealing unit connected to the housing, the multiple head sealing unit including the at least two ferrite cores.
4. (NEW) The multiple head induction sealing unit of claim 3, further comprising:
 - at least one cooling fan disposed in the housing;
 - the at least one cooling fan being directed to circulate a cooling gas through a plurality of core openings within the at least two ferrite cores, whereby cooling is achieved without water.

5. (NEW) The multiple head induction sealing unit of claim 4, further comprising a heatsink operably coupled to the at least two ferrite cores for drawing heat away from the ferrite cores.

6. (NEW) The multiple head induction sealing unit of claim 5, wherein the at least one cooling fan also directs the cooling gas across the heatsink.

7. (NEW) The multiple head induction sealing unit of claim 3 further comprising:
at least one intake fan disposed in the housing;
at least one outtake fan disposed in the housing;
each of the ferrite cores having a plurality of openings therein; and
the at least one intake fan and the at least one outtake fan structured and arranged within the housing to cooperatively circulate a cooling gas through the plurality of core openings within the at least two ferrite cores, whereby cooling is achieved without water.

8. (NEW) The multiple head induction sealing unit of claim 1, wherein each of the at least two ferrite cores include individual ferrite elements.

9. (NEW) The multiple head induction sealing unit of claim 8, wherein the individual ferrite elements include E-shaped ferrite elements structured and arranged with an open end of one E-shaped ferrite element facing an open end of another E-shaped ferrite element, thereby forming a plurality of core openings.

10. (NEW) The multiple head induction sealing unit of claim 3, further comprising a cover attached to the housing the cover substantially covering a downwardly projecting portion of the at least two ferrite cores.

11. (NEW) The multiple head induction sealing unit of claim 2, further comprising:
an energizing assembly including at least:
the litz wire coil;
a capacitor electrically connected to the litz wire coil and a transformer; and
a power supply electrically coupled to the transformer.
12. (NEW) The multiple head induction sealing unit of claim 1 further comprising:
a mounting plate;
the at least two channel-shaped ferrite cores mounted on the mounting plate.
13. (NEW) The multiple head induction sealing unit of claim 12, wherein
the mounting plate has a plurality of plate openings therethrough;
each of the at least two ferrite cores has a plurality of core openings therethrough
and is mounted to the mounting plate such that the plurality of plate openings and the core
openings coincide with each other to allow a cooling gas to flow therethrough; and
a litz wire coil is disposed proximate to each of the at least two ferrite cores
structured and is arranged to direct an electromagnetic field towards an object to be heated.
14. (NEW) The multiple head induction sealing unit of claim 1 further comprising:
a conveyor structured and arranged to move objects to be sealed in a
predetermined workflow direction;
the at least two ferrite cores being disposed above the conveyor.